

**NODE TRANSLATION AND PROTECTION IN A CLUSTERED
MULTIPROCESSOR SYSTEM**

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Abstract of the Disclosure

10 A method of node translation for communicating over virtual channels in a
clustered multiprocessor system using connection descriptors (CDs), which specify
the endpoint nodes for virtual connections. The system includes a local processing
element node, a remote processing element node and a network interconnect
therebetween for sending communications between the processing element nodes.
The method includes assigning a CD to specify an endpoint node for a virtual
connection, defining a local connection table (LCT) to be accessed with the CD to
15 produce a system node identifier (SNID) of the endpoint node, generating a
communication request including the CD, accessing the LCT using the CD of that
communication request to produce the SNID for the endpoint node of the connection
in response to that request, and sending a memory request to the endpoint node. The
memory request is sent to the local processing element node if the endpoint node is
20 the local processing element node, and is sent over the network interconnect to the
remote processing element node if the endpoint node is the remote processing
element node.

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